



RAW SEQUENCE LISTING DATE: 01/04/2001
PATENT APPLICATION: US/09/674,235 TIME: 09:01:20

Input Set : A:\PTO.txt

Output Set: N:\CRF3\01042001\1674235.raw

```
3 <110> APPLICANT: Sagami Chemical Research Center
      5 <120> TITLE OF INVENTION: Human Proteins Having Transmembrane Domains and DNAs Encoding these
             Proteins
      8 <130> FILE REFERENCE: 661099
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/674,235
C--> 11 <141> CURRENT FILING DATE: 2000-05-19
     13 <150> PRIOR APPLICATION NUMBER: JP 10-119395
     14 <151> PRIOR FILING DATE: 1998-04-28
     16 <160> NUMBER OF SEQ ID NOS: 36
     18 <170> SOFTWARE: Windows 95 (Word 98)
     21 <210> SEQ ID NO: 1
     22 <211> LENGTH: 268
     23 <212> TYPE: PRT
     24 <213> ORGANISM: Homo sapiens
      26 <400> SEQUENCE: 1
     27 Met Ala Phe Glu Glu Leu Leu Ser Gl<br/>n Val Gly Gly Leu Gly Arg Phe 28 1 5 10 15
      29 Gln Met Leu His Leu Val Phe Ile Leu Pro Ser Leu Met Leu Leu Ile
30 25 30
      31 Pro His Ile Leu Leu Glu Asn Phe Ala Ala Ala Ile Pro Gly His Arg
32 35 40 45
      33 Cys Trp Val His Met Leu Asp Asn Asn Thr Gly Ser Gly Asn Glu Thr 34 \phantom{-}50\phantom{0} \phantom{-}55\phantom{0} \phantom{-}60\phantom{0}
      35 Gly Ile Leu Ser Glu Asp Ala Leu Leu Arg Ile Ser Ile Pro Leu Asp 36 65 70 75 80
      37 Ser Asn Leu Arg Pro Glu Lys Cys Arg Arg Phe Val His Pro Gln Trp
      39 Gln Leu feu His Leu Asn Gly Thr Tle His Ser Thr Ser Glu Ala Asp 40 100 105 110
      41 Thr Glu Pro Cys Val Asp Gly Trp Val Tyr Asp Gln Ser Tyr Phe Pro
42 1.15 1.20 1.25
      43 Ser Thr Ile Val Thr Lys Trp Asp Leu Val Cys Asp Tyr Gln Ser Leu
44 130 135
      45 Lys Ser Val Val Gln Phe Leu Leu Thr Gly Met Leu Val Gly Gly 46 145 150 160
      47 Ile Ile Gly Gly His Val Ser Asp Arg Trp Leu Val Glu Ser Ala Arg
48 165 170 175
      49 Trp Leu Ile Ile Thr Asn Lys Leu Asp Glu Gly Leu Lys Ala Leu Arg 50 180 185 190
      51 Lys Val Ala Arg Thr Asn Gly Ile Lys Asn Ala Glu Glu Thr Leu Asn 52 200 205
      53 Ile Glu Val Val Arg Ser Thr Met Gln Glu Glu Leu Asp Ala Ala Gln 54 210 215
      54 21-0
      55 Thr Lys Thr Thr Val Cys Asp Leu Phe Arg Asn Pro Ser Met Arg Lys 56 225 230 240
      57 Arg Ile Cys Ile Leu Val Phe Leu Arg Lys Lys Ile Ser Arg Lys Arg
                                                   250
```





RAW SEQUENCE LISTING PATENT APPLICATION: US/09/674,235

DATE: 01/04/2001 TIME: 09:01:20

Input Set : A:\PTO.txt

Output Set: N:\CRF3\01042001\1674235.raw

59 His Lys Asn Asp Cys Tyr Thr Lys Val Thr Lys Phe 260 62 <210> SEQ ID NO: 2 63 <21.1> LENGTH: 236 64 <212> TYPE: PRT 65 <213> ORGANISM: Homo sapiens 67 <400> SEQUENCE: 2 68 Met Ala Glu Pro Ser Ala Ala Thr Gln Ser His Ser Tle Ser Ser Ser 69 1 5 10 1.5 70 Ser Phe Gly Ala Glu Pro Ser Ala Pro Gly Gly Gly Gly Ser Pro Gly 71 20 25 30 72 Ala Cys Pro Ala Leu Gly Thr Lys Ser Cys Ser Ser Ser Cys Ala Val 40. 73 35 74 His Asp Leu Ile Phe Trp Arg Asp Val Lys Lys Thr Gly Phe Val Phe 75 50 55 60 76 Gly Thr Thr Leu 11e Met Leu Leu Ser Leu Ala Ala Phe Ser Val 11e 77 65 70 80 78 Ser Val Val Ser Tyr Leu Ile Leu Ala Leu Leu Ser Val Thr Ile Ser 79 85 90 95 80 Phe Arg Ile Tyr Lys Ser Val Ile Gln Ala Val Gln Lys Ser Glu Glu 81 $$100\$ 82 Gly His Pro Phe Lys Ala Tyr Leu Asp Val Asp Ile Thr Leu Ser Ser 83 115 120 125 84 GLu Ala Phe His Asn Tyr Met Asn Ala Ala Met Val His 1le Asn Arg 85 130 135 140 88 Ser Leu Lys Leu Ala Val Phe Met Trp Leu Met Thr Tyr Val Gly Ala 89 165 170 90 Val Phe Asn Gly Ile Thr Leu Leu Ile Leu Ala Glu Leu Leu Ile Phe 91 180 185 190 92 Ser Val Pro Ile Val Tyr Glu Lys Tyr Lys Thr Gln Ile Asp His Tyr 93 195 200 205 94 Val Gly Ile Ala Arg Asp Gin Thr Lys Ser 11e Val Glu Lys Ile Gln 95 210 215 220 96 Ala Lys Leu Pro Gly Ile Ala Lys Lys Lys Ala Glu 97 225 230 235 97 225 99 <210> SEQ 1D NO: 3 100 <21.1> LENGTH: 261 101 <212> TYPE: PRT 102 <213> ORGANISM: Homo sapiens 104 <400> SEQUENCE: 3 105 Met Ala Gly Pro Glu Leu Leu Leu Asp Ser Asn Ile Arg Leu Trp Val 10 106 1 5 107 Val Leu Pro Ile Val Ile Ile Thr Phe Phe Val Gly Met Ile Arg His 25 20 109 Tyr Val Ser Ile Leu Leu Gln Ser Asp Lys Leu Thr Gln Glu Gln 110 35 40 45 lli Val Ser Asp Ser Gin Val Leu Ile Arg Ser Arg Val Leu Arg Glu Asn





DATE: 01/04/2001 TIME: 09:01:20 RAW SEQUENCE LISTING PATENT APPLICATION: US/09/674,235

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\1674235.raw

												60				
112		50			_		55	0	nha	T (31)	mh as		T v.c	murc	Twr	Pho
		Lys	Tyr	11e	Pro		GIn	Ser	PHC	Leu	75	ALG	nys	Tyr	. <u></u>	80
114	65				_	70	(1)	ry In an		1		1 770	Ara	Luc	Va l	_
	Asn	Asn	Pro	Glu		GIY	Pne	Pne	Lys	LYS	111.1	1.75	ary	Lys	95	1 . 2
116					85				ml	90	Lau	III have	Acn	Mat		LAZS
117	Pro	Pro	ser		Met	Thr	Asp	Pro	rnr	Met	Leu	THE	ASP	Met 110	rie c	Dy S
118				100		_			105		-	×1-	a1		mer.	1110
119	Gly	Asn		Thr	Asn	Val	Leu	Pro	Met	116	Leu	116	era	Gly	rrp	116
120			115					1.20				1	125	Dla o	Fino	Laur
121	Asn	Met	Thr	Phe	ser	GŢÀ	Phe	Val	Thr	Thr	Lys	val	Pro	Phe	PLO	пен
122		130					135				>	140			Y	nile se
123	Thr	Leu	Arg	Phe	ГЛR		Met	Leu	Gln	G l. n	Gly	He	Gitu	Leu	Leu	THE
124	1.45					150					155		_ ,	_		160
125	Leu	Asp	Ala	Ser		Val	Ser	ser	Ala	Ser	Trp	Tyr	Phe	Leu	ASII	va.i
126					165					170			- 3		175	
1.27	Phe	Gly	Leu	Arg	ser	lle	Tyr	ser	Leu	Tle	Leu	GLY	GIn	Asp	ASI	Ala
128				180					185					190		
1.29	Ala	Asp	GLn	ser	Arg	меt	Met.	Gln	GLu	Gln	Met	Thr	Gly	Ala	Ala	мет
130			195					200				_	205			. 1 -
131	Ala	Met	Pro	Ala	Asp	Thr	Asn	Lys	Ala	Phe	Lys	Thr	GLu	Trp	GLu	Ala
132		210				-	215					220				
133	Leu	Gl.u	tæu	Thr	Asp	His	Gin	Trp	Ala	Leu	Asp	Asp	Val	Glu	GLu	GLU
134	225					230					235					240
135	Leu	Met	Ala	Lys	Asp	Leu	His	Phe	Glu	Gly	Met	Phe	Lys	Lys	GLU	Leu
136					245					250					255	
137	Gln	Thr	ser	I l.e	Phe											
138				260												
140	<21	0> S	EQ I	D NO	: 4			,								
141	<21	1> L	ENGT	H: 3	28											
142	<21	2> T	YPE:	PRT												
1.43	<21.	3> 0	RGAN	LSM:	Hom	o sa	pien	S								
1.45	<40	0> S	EQUE	NCE:	4										_	_
1.46	Met	Val	Ser	Lys	Ala	Leu	Leu	Arg	Leu	Val	Ser	Ala	Vai	Asn	Arg	Arg
147	1				5					10					15	
1.48	٨rg	Met	Lys	Leu	Leu	Leu	Gly	He	Ala	Leu	Leu	Ala	Tyr	Va.l	A.t a	ser
149		,		20					25				_	30		-1
150	Val	Trp	Gly	Asn	Phe	Va l.	Asn	Met	Ser	Phe	Leu	Leu	Asn	Arg	ser	Tre
151			35					40					45	a.1		17-1
152	Gln	Glu	Asn	Gly	Glu	Leu	Lys	He	Glu	Ser	Lys	He	Glu	Glu	мес	val
1.53		50					55					60				~ 3.
154	G l.u	Pro	Leu	Arg	Glu			Arg	Asp	Leu	Glu	Lys	Ser	Phe	Thr	GIn
155						70					75					80
100 100 100	65						10 15 .5	T /514	Ser	Glu	LAZS	ASD	Arq	LVS	$\Delta r\alpha$	Tle
156	65 Lys	Tyr	Pro	Pro	Val	Lys	PHE	Leu			127 15			-2.0	111.9	
156 157	ГЛЗ				85					90					95	
156 157	ГЛЗ				85				Val.	90				Thr	95	
156 157 158	Lys Leu	He	Thr	Gly	85 Gly	Ala	Gly	Phe	Val. 105	90 Gl.y	ser	Hi.s	Leu	Thr 110	Asp	Lys
156 157 158	Lys Leu	He	Thr	Gly	85 Gly	Ala	Gly	Phe Val	Val. 105 Thr	90 Gl.y	ser	Hi.s	Leu Asn	Thr 110 Phe	Asp	Lys
156 157 158 159 160	Lys Leu Leu	11e Met	Thr Met	Gly 100 Asp	85 Gly Gly	Ala His	Gly	Phe Val 120	Val. 105 Thr	90 Gly Val	ser Val	His Asp	Leu Asn 125	Thr 110 Phe	Asp Phe	Lys Thr
156 157 158 159 160	Lys Leu Leu	11e Met	Thr Met	Gly 100 Asp	85 Gly Gly	Ala His	Gly	Phe Val 120	Val. 105 Thr	90 Gly Val	ser Val	His Asp	Leu Asn 125	Thr 110 Phe	Asp Phe	Lys Thr





RAW SEQUENCE LISTING PATENT APPLICATION: US/09/674,235

DATE: 01/04/2001 TIME: 09:01:20

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\1674235.raw

163		1 20					135					1.40				
163		130	λ σ .ν	His	A a n	Val		Clu	Dro	Lau	Tur		C1n	Glv	Va I	Glu
		TIG	ASD	11.15	ASP	1.50	VGI	OLU	1.10	Beu	155	11.0	OLU	O.i. y	,	160
165	140	A 22.5	V-> 1	Ala	Amer		Dho	Acn	Thr	Dhe		Pro	Ara	Met	His	
	Val	Arg	Agi	Ala	165	1.10	PHE	WPII	1111	170	G.t.y	1.10	AL 9	140.0	175	1100
167	•		C1	Arg		1/4.1	car	Aco	Dha		Lou	Cln	Δla	Lou		Gly
	ASB	ASp	GTÄ		Val	V (1.1	30 L	ASII	185	11.0	ыси	OLI	пта	190	0111	O.L.
169		_		180	37 7	ff) a	C1	Com		Car	(23.0	mh r	λωσ		Dha	Glo
	GLU	Pro		$\operatorname{Th} r$	var	TAT	GTY	200	G.L Y	ser	GLII	1 111.	205	A I. G	t ne	Gitt
171			195		r	v- 1	200		Lan	1/0.3	λ T -\	Tanı		λen	car	Agn
	Tyr		ser	Asp	ren	V & J.			i.c.u	Val	HIG	220	ere c	ASII	961	Man
173		210	_				215			D #	a1		11 5 0	mils w	TLO	Lou
		Ser	Ser	Pro	Val		ьец	GTÀ	ASII	Pro	GIU	GLu	HIS	THE.	LIE	240
	225			_		230	_	_	_		235		0.1	O	01	
176	GLu	Phe	Ala	Gln		Tle	Lys	Asn	Leu		GLY	ser	GLY	ser		116
177					245		_			250	- 1	_			255	
178	Gln	Phe	Leu	ser	Gl.u	Ala-	Gln	Asp		Pro	G.I.n	Lys	Arg		Pro	Asp
179				260					265					270		_
180	11e	Lys		Ala	Lys	Leu	Met		Gly	тр	Glu	Pro	Val	Val	Pro	Leu
181			275					280					285			
182	Glu	Glu	Gly	Leu	Asn	Lys	Ala	Ile	His	Tyr	Phe	Arg	Lys	Glu	Leu	Glu
183		290					295					300				_
184	Түг	Gln	Ala	Asn	Asn		Tyr	He	Pro	Lys		Lys	P.ro	Ala	Arg	He
185	305					310					315					320
186	Lys	Lys	Gly	Arg	Thr	Arg	His	Ser								
187					325											
	<21.0	0> SI	EQ TI	D NO												
189				D NO H: 30	: 5											
189 190	<21	1> L		H: 30	: 5											
189 190 191	<21.	1> L1 2> T	ENGTI YPE :	H: 30	: 5 00	o saj	pien:	S								
189 190 191 192 194	<213 <213 <213 <400	1> L1 2> T 3> O1 0> S1	ENGTI YPE: RGAN. EQUEI	H: 30 PRT ISM: NCE:	: 5 00 Home 5											
189 190 191 192 194	<213 <213 <213 <400	1> L1 2> T 3> O1 0> S1	ENGTI YPE: RGAN. EQUEI	H; 3(PRT ISM:	: 5 00 Home 5				Leu	Leu	Leu	Pro	Leu	Leu		Val
189 190 191 192 194 195 196	<21: <21: <21: <400 Met.	1> L1 2> T 3> 01 0> S1 Lys	ENGTI YPE: RGAN EQUEI Phe	H: 30 PRT ISM: NCE: Leu	: 5 00 Home 5 Leu 5	Asp	Ile	Leu		10					15	
189 190 191 192 194 195 196	<21: <21: <21: <400 Met.	1> L1 2> T 3> 01 0> S1 Lys	ENGTI YPE: RGAN EQUEI Phe	H: 30 PRT ISM: NCE: Leu	: 5 00 Home 5 Leu 5	Asp	Ile	Leu		10					15	
189 190 191 192 194 195 196 197	<21: <21: <21: <40: Met. 1. Cys	1> L1 2> T 3> 01 0> S1 Lys Ser	ENGTI YPE: RGAN. EQUEI Phe Leu	H: 30 PRT ISM: NCE: Leu Glu 20	: 5 00 Homo 5 Leu 5 Ser	Asp Phe	Ile Val	Leu Lys	Leu 25	10 Phe	Ile	Pro	Lys	Arg 30	15 Arg	Lys
189 190 191 192 194 195 196 197	<21: <21: <21: <40: Met. 1. Cys	1> L1 2> T 3> 01 0> S1 Lys Ser	ENGTI YPE: RGAN. EQUEI Phe Leu	H: 30 PRT ISM: NCE: Leu Glu	: 5 00 Homo 5 Leu 5 Ser	Asp Phe	Ile Val	Leu Lys	Leu 25	10 Phe	Ile	Pro	Lys	Arg 30	15 Arg	Lys
189 190 191 192 194 195 196 197 198 199 200	<211 <211 <2400 Met. 1. Cys	1> L1 2> T 3> O1 0> S1 Lys Ser Val	ENGTI YPE: RGAN. EQUE! Phe Leu Thr 35	H: 30 PRT ISM: NCE: Leu Glu 20 Gly	: 5 00 Homo 5 Leu 5 Ser	Asp Phe Ile	lle Val Val	Leu Lys Leu 40	Leu 25 Ile	10 Phe Thr	Ile Gly	Pro Ala	Lys Gly 45	Arg 30 His	15 Arg Gly	Lys Ile
189 190 191 192 194 195 196 197 198 199 200	<211 <211 <2400 Met. 1. Cys	1> L1 2> T 3> O1 0> S1 Lys Ser Val	ENGTI YPE: RGAN. EQUE! Phe Leu Thr 35	H: 30 PRT ISM: NCE: Leu Glu 20	: 5 00 Homo 5 Leu 5 Ser	Asp Phe Ile	lle Val Val	Leu Lys Leu 40	Leu 25 Ile	10 Phe Thr	Ile Gly	Pro Ala	Lys Gly 45	Arg 30 His	15 Arg Gly	Lys Ile
189 190 191 192 194 195 196 197 198 199 200 201 202	<21: <21: <40: Met. 1. Cys Ser	1> L1 2> T' 3> 01 0> SI Lys Ser Val Arg 50	ENGTI YPE: RGAN. EQUEI Phe Leu Thr 35 Leu	H: 30 PRT ISM: NCE: Leu Glu 20 Gly	: 5 00 Homo 5 Leu 5 Ser Glu	Asp Phe Ile Tyr	Ile Val Val Glu 55	Leu Lys Leu 40 Phe	Leu 25 Ile Ala	10 Phe Thr Lys	Ile Gly Leu	Pro Ala Lys	Lys Gly 45 Ser	Arg 30 His Lys	15 Arg Gly Leu	Lys Ile Val
189 190 191 192 194 195 196 197 198 199 200 201 202	<21: <21: <40: Met. 1. Cys Ser	1> L1 2> T' 3> 01 0> SI Lys Ser Val Arg 50	ENGTI YPE: RGAN. EQUEI Phe Leu Thr 35 Leu	H: 30 PRT ISM: NCE: Leu Glu 20 Gly	: 5 00 Homo 5 Leu 5 Ser Glu	Asp Phe Ile Tyr	Ile Val Val Glu 55	Leu Lys Leu 40 Phe	Leu 25 Ile Ala	10 Phe Thr Lys	Ile Gly Leu	Pro Ala Lys	Lys Gly 45 Ser	Arg 30 His Lys	15 Arg Gly Leu	Lys Ile Val
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65	1> Li 2> T' 3> Oi 0> Si Lys Ser Val Arg 50	ENGTI YPE: RGAN. EQUE Phe Leu Thr 35 Leu	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr	: 5 00 Homo 5 Leu 5 Ser Glu Ala	Asp Phe Ile Tyr Lys 70	Tle Val Val Glu 55 His	Leu Lys Leu 40 Phe Gly	Leu 25 Ile Ala Leu	10 Phe Thr Lys Glu	Ile Gly Leu Glu 75	Pro Ala Lys 60 Thr	Lys Gly 45 Ser Ala	Arg 30 His Lys Ala	15 Arg Gly Leu Lys	Lys Ile Val Cys 80
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65	1> Li 2> T' 3> Oi 0> Si Lys Ser Val Arg 50	ENGTI YPE: RGAN. EQUE Phe Leu Thr 35 Leu	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr	: 5 00 Homo 5 Leu 5 Ser Glu Ala	Asp Phe Ile Tyr Lys 70	Tle Val Val Glu 55 His	Leu Lys Leu 40 Phe Gly	Leu 25 Ile Ala Leu	10 Phe Thr Lys Glu	Ile Gly Leu Glu 75	Pro Ala Lys 60 Thr	Lys Gly 45 Ser Ala	Arg 30 His Lys Ala	15 Arg Gly Leu Lys	Lys Ile Val Cys 80
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204 205 206	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65 Lys	1> L1 2> T' 3> O1 0> S1 Lys Ser Val Arg 50 Trp	ENGTH YPE: RGAN. EQUENTE Phe Leu Thr 35 Leu Asp	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile	: 5 00 Homo 5 Leu 5 Ser Glu Ala Asn Ala 85	Asp Phe Ile Tyr Lys 70 Lys	Tle Val Val Glu 55 His Val	Leu Lys Leu 40 Phe Gly	Leu 25 Ile Ala Leu	10 Phe Thr Lys Glu Phe 90	Ile Gly Leu Glu 75 Val	Pro Ala Lys 60 Thr	Lys Gly 45 Ser Ala Asp	Arg 30 His Lys Ala Cys	15 Arg Gly Leu Lys Ser 95	Lys fle Val Cys 80 Asn
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204 205 206	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65 Lys	1> L1 2> T' 3> O1 0> S1 Lys Ser Val Arg 50 Trp	ENGTH YPE: RGAN. EQUENTE Phe Leu Thr 35 Leu Asp	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile	: 5 00 Homo 5 Leu 5 Ser Glu Ala Asn Ala 85	Asp Phe Ile Tyr Lys 70 Lys	Tle Val Val Glu 55 His Val	Leu Lys Leu 40 Phe Gly	Leu 25 Ile Ala Leu	10 Phe Thr Lys Glu Phe 90	Ile Gly Leu Glu 75 Val	Pro Ala Lys 60 Thr	Lys Gly 45 Ser Ala Asp	Arg 30 His Lys Ala Cys	15 Arg Gly Leu Lys Ser 95	Lys fle Val Cys 80 Asn
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65 Lys	1> L1 2> T 3> O1 0> S1 Lys Ser Val Arg 50 Trp Gly	ENGTHYPE: RGAN. EQUENTHE Phe Leu Thr 35 Leu Asp Leu Asp	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile Gly Ile 100	Homo Ser Glu Ala Asn Ala 85	Asp Phe Ile Tyr Lys 70 Lys Ser	Ile Val Val Glu 55 His Val Ser	Leu Lys Leu 40 Phe Gly His	Leu 25 11e Ala Leu Thr Lys 105	10 Phe Thr Lys Glu Phe 90 Lys	Ile Gly Leu Glu 75 Val	Pro Ala Lys 60 Thr Val	Lys Gly 45 Ser Ala Asp	Arg 30 His Lys Ala Cys Glu 110	15 Arg Gly Leu Lys Ser 95 Ile	Lys Tle Val Cys 80 Asn
189 190 191 192 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65 Lys	1> L1 2> T 3> O1 0> S1 Lys Ser Val Arg 50 Trp Gly	ENGTHYPE: RGAN. EQUENTHE Phe Leu Thr 35 Leu Asp Leu Asp	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile Gly Ile 100	Homo Ser Glu Ala Asn Ala 85	Asp Phe Ile Tyr Lys 70 Lys Ser	Ile Val Val Glu 55 His Val Ser	Leu Lys Leu 40 Phe Gly His	Leu 25 11e Ala Leu Thr Lys 105	10 Phe Thr Lys Glu Phe 90 Lys	Ile Gly Leu Glu 75 Val	Pro Ala Lys 60 Thr Val	Lys Gly 45 Ser Ala Asp	Arg 30 His Lys Ala Cys Glu 110	15 Arg Gly Leu Lys Ser 95 Ile	Lys Tle Val Cys 80 Asn
1899 1901 1912 1944 1955 1966 1977 1988 1999 2001 2012 2023 2034 2055 2066 2077 2088 2099	<21: <21: <400 Met. 1. Cys Ser Gly Leu 65 Lys	1> L1 2> T 3> O1 0> S1 Lys Ser Val Arg 50 Trp Gly	ENGTHYPE: RGAN. EQUENTHE Phe Leu Thr 35 Leu Asp Leu Asp	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile Gly	Homo Ser Glu Ala Asn Ala 85	Asp Phe Ile Tyr Lys 70 Lys Ser	Ile Val Val Glu 55 His Val Ser	Leu Lys Leu 40 Phe Gly His	Leu 25 11e Ala Leu Thr Lys 105	10 Phe Thr Lys Glu Phe 90 Lys	Ile Gly Leu Glu 75 Val	Pro Ala Lys 60 Thr Val	Lys Gly 45 Ser Ala Asp	Arg 30 His Lys Ala Cys Glu 110	15 Arg Gly Leu Lys Ser 95 Ile	Lys Tle Val Cys 80 Asn
1899 1910 1911 1922 1944 1955 1966 1977 1988 2002 2013 2024 2055 2066 2077 2088 2099 2010	<211 <221. <2400 Met. 1. Cys Ser Gly Leu 65 Lys Arg	11> LL2> TT2> T3> OID 12> T3> OID 12> T3> OID 12> T3> OID 13> OID 14> OID 15>	ENGTHYPE: RGAN EQUEE Phe Leu Thr 35 Leu Asp Leu Asp Ser 115	H: 30 PRT ISM: Leu Leu 20 Glu 20 Gly Thr Ile Gly Ile 100 Ile 100 Ile	Homo 5 Leu 5 Ser Glu Ala Asn Ala 85 Tyr Leu	Asp Phe Ile Tyr Lys 70 Lys Ser Val	Tie Val Val Glu 55 His Val Ser Asn	Leu Lys Leu 40 Phe Gly His Ala Asn 120	Leu 25 11e Ala Leu Thr Lys 105 Ala	Thr Lys Glu Phe 90 Lys	Ile Gly Leu Glu 75 Val Val	Pro Ala Lys 60 Thr Val Lys	Lys Gly 45 Ser Ala Asp Ala Tyr 125	Arg 30 His Lys Ala Cys Glu 110 Thr	15 Arg Gly Leu Lys Ser 95 Ile Ser	Lys fle Val Cys 80 Asn Gly
1899 1901 1912 1943 1955 1977 1988 1999 2000 2012 2033 2044 2055 2066 2077 2089 2010 2012 2012 2013 2014 2015 2016 2017 2018 2018 2018 2018 2018 2018 2018 2018	<211 <221. <2400 Met. 1. Cys Ser Gly Leu 65 Lys Arg	1> LL2> TT2> T3> Old T2> T2> T3> Old T2> T3> Old T2> T3> Old T2> T3> Old T2> T2> T2> T3> Old T2> T2> T2> T3> T2> T2> T2> T2> T2> T2> T2> T2> T2> T2	ENGTHYPE: RGAN EQUEE Phe Leu Thr 35 Leu Asp Leu Asp Ser 115	H: 30 PRT ISM: NCE: Leu Glu 20 Gly Thr Ile Gly Ile 100	Homo 5 Leu 5 Ser Glu Ala Asn Ala 85 Tyr Leu	Asp Phe Ile Tyr Lys 70 Lys Ser Val	Tie Val Val Glu 55 His Val Ser Asn	Leu Lys Leu 40 Phe Gly His Ala Asn 120	Leu 25 11e Ala Leu Thr Lys 105 Ala	Thr Lys Glu Phe 90 Lys	Ile Gly Leu Glu 75 Val Val	Pro Ala Lys 60 Thr Val Lys	Lys Gly 45 Ser Ala Asp Ala Tyr 125	Arg 30 His Lys Ala Cys Glu 110 Thr	15 Arg Gly Leu Lys Ser 95 Ile Ser	Lys fle Val Cys 80 Asn Gly
1899 1900 1911 1922 1944 1955 1966 1977 1988 1999 2000 2011 2022 2036 2077 2088 2099 2100 2111 2112	<211 <221.400 Met. 1 Cys Ser Gly Leu 65 Lys Arg Asp	1> LL2> TT2> T3> OIO 1> ST2> T7 2> T	YPE: RGAN. EQUED Phe Leu Thr 35 Leu Asp Leu Asp	H: 30 PRT ISM: Leu Leu 20 Glu 20 Gly Thr Ile Gly Ile 100 Ile 100 Ile	Homos Ser Glu Ala Asn Ala 85 Tyr Leu Gln	Asp Phe Ile Tyr Lys 70 Lys Ser Val	Val Val Glu 55 His Val Ser Asn Pro	Leu 40 Phe Gly His Ala Asn 120 Gln	Leu 25 Ile Ala Leu Thr Lys 105 Ala Ile	Thr Lys Glu Phe 90 Lys Gly	Ile Gly Leu Glu 75 Val Val Val	Pro Ala Lys 60 Thr Val Lys Val Thr 140	Lys Gly 45 Ser Ala Asp Ala Tyr 125 Phe	Arg 30 His Lys Ala Cys Glu 110 Thr	15 Arg Gly Leu Lys Ser 95 11e Ser Val	Lys fle Val Cys 80 Asn Gly Asp





DATE: 01/04/2001 TIME: 09:01:20 RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/674,235

Input Set : A:\PTO.txt
Output Set: N:\CRF3\01042001\1674235.raw

214	145					150					155					160
215	Lys	Asn	Asn	His	Cly	His	He	Val	Thr	Val	Ala	ser	Ala	Al.a	Gly	His
216	-				165					170					1.75	
217	Va.l	Ser	Val	Pro	Phe	Leu	Len	Ala	Tyr	Cys	ser	Ser	Lys	Phe	Ala	A.l.a
218				180					185	-				190		
	Va l	Clv	Phe	His	Lvs	Thr	Leu	Thr	Asp	Glu	Leu	Ala	Ala	Leu	Cln	$_{11e}$
220	, 4.2	O. I	195		227 0			200					205			
	mbr	C137		Luc	Thr	Thr	CVS		CVS	Pro	Asn	Phe	Val	Asn	Thr	Glv
222	1111	210	val	пул	.2.11.1.	Y 11.T	215	LIC U	0,0	110		220				1
	nha		T	100	Dec	cor		car	1.00	Gly	Uro		Leu	Glo	Pro	Gla
		116	Lys	asu	11.0	230	1111.	361	ne.u	GLY	235	1111	шош	OLU	120	240
	225						N 7 4-	*1.2	01	710		mlyw	Clu	Cl n	T ****	
	Glu	vaj.	val	Asn		Leu	Mer	HIS	GIY	Tle	neu	1111	GIU	(3.1.11	255	HEC
226					245				1	250		en1 .		01	_	T 1 a
	Lle	Phe	He		ser	Ser	Tle	Ala		Leu	inr	Tinr	ren		Arg	11.6
228				260					265					270		_
229	Leu	Pro	GLu	Arg	Phe	Leu	Ala		Leu	Lys	Arg	Lys		ser	va.r	гàг
230			275					280					285	•		
231	Phe	Asp	Ala	Val	He	Gly	Tyr	Lys	Met.	Lys	Ala	Gln				
232		290					295					300				
234	<21	0> SI	EQ II	ON C	: 6											
235	<21	l> Li	ENGTI	1: 18	32											
236	<21.	2> T'	YPE:	PRT												
237	<21.	3> 01	RGAN:	ISM:	Homo	sa)	oi.en:	3								
239	<40	0> SI	EOUE	NCE:	•											
						Trp	Leu	Ala	Leu	Leu	Leu	Gly	Ala	Leu	Leu	Gly
241	1.	,		,	. 5	•				10					15	
		Ala	Tro	Ala	Ara	Ara	ser	Gln	Asp	Leu	Hi.s	Cvs	Gly	Ala	Cys	Arg
243	1111	112.14	12.1	20			•		25			4	_	30	•	
2.14	ΛΊа	Lou	Val		C3 n	Len	Clu	Tiro		He	Ala	Gln	Val	Asp	Pro	Lvs
245	ALG	, Lietu	35	иэр	CILU	110.0	CIO	40	0.1.0	110	111.4		45	<u> </u>		
	T	mb w		C3n	Mot	Clv	ear		ara	Ile	Δen	pro		Glv	Ser	Gla
	БУБ	50	1. 1. 65	(3 1.11	pre t.	(1.1. <u>y</u>	55	rnc	ru g	116	1 (2)11	60	TILLE	011	201	.,
247	CI		5.7 m 3	c1	17-1	Dans		A 3 ==	Ares	Ser	c) u		ніс	T.011	Thr	Glu
		Val	Val	GLU	Va.L	70	т ў т	ELG	Arg	961	75	AIU	11.1.5	ыси	1. 17.6	80
249	65			G 1	*1.			A	Monto	Tria		mers	Clu	C7.11	Cln	
	ren	Leu	GIU	GLU		Cys	ASP	arg	Me C	Lys	GLU	тут	G 1. Y	GIU	95	1 7 6:
25.1					85	_	_	_		90		*** 7	3.5- 1	43		3 ~ ~
	Asp	Pro	Ser		Has	Arg	Lys	Asn		Val	Arg	vai	Val		Arg	asn
253				100					105			_		110		
	Gly	Glu		Ser	Glu	Leu	Asp		Gln	Gly	T.l.e	Arg	He	Asp	ser	Asp
255			3.15					120					125			
256	T 3.e	ser	Gly	Th.r	Leu	ьys	Phe	Ala	Cys	Glu	Ser		Va.l	Glu	GLu	Tyr
257		130					135					140				
258	Glu	Asp	Glu	Leu	11.e	Glu	Phe	Phe	ser	Arg	Glu	Ala	Asp	Asn	Val	Lys
259	145					150					.155					160
260	Asp	Lys	Leu	Cys	Ser	Lys	Arg	Thr	Asp	Leu	Cys	Asp	His	Ala	Leu	His
261	•	•		-	165					170					175	
	lle	ser	His	Asp	Glu	Leu										
263	••			180												
	<21	0> S1	EO JI	ON C	: 7											





VERIFICATION SUMMARY
PATENT APPLICATION: US/09/674,235

DATE: 03/04/2001 TIME: 09:01:21

Input Set : A:\PTO.txt

Output Set: N:\CRF3\01042001\1674235.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:705 M:361 W: Invalid Split Codon, Sequence data for SEQ 1D#: 21 L:1208 M:112 C: (48) String data converted to lower case,